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Minimum
Maximum
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Perfect score:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
Bd
                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein search, using sw model
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1. /SIDS1/gcgda

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3. /SIDS1/gcgda

4. /SIDS1/gcgda

5. /SIDS1/gcgda

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Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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315
1 ENPKHNKCLQSCNSERDSYR.....
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                                                                                                                                                                                                                                                                                                                                                                           /SIDSI/gcgdata/geneseq/geneseqp/Aa188).hAT:*
/SIDSI/gcgdata/geneseq/geneseqp/Aa1990.bAT:*
/SIDSI/gcgdata/geneseq/geneseqp/Aa1991.bAT:*
/SIDSI/gcgdata/geneseq/geneseqp/Aa1991.bAT:*
/SIDSI/gcgdata/geneseq/geneseqp/Aa1993.bAT:*
/SIDSI/gcgdata/geneseq/geneseqp/Aa1994.bAT:*
/SIDSI/gcgdata/geneseq/geneseqp/Aa1994.bAT:*
/SIDSI/gcgdata/geneseq/geneseqp/Aa1996.bAT:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENPKHNKCLQSCNSERDSYR......EECEEGEIPRPRPRPQHPER 55
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Y40999
W22149
                                                                                                                     W62834
W22150
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Y30427
                                  Y30426
Y30436
R91711
                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                       chance to have a result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               268485
          Glycine max antimi Soybean beta congl Peanut allergen Ar Arachis hypogaea a Peanut allergen Ar Peanut allergen, A Peanut allergen, A Peanut allergen 11 Mature nematode ex AcaNAP45. Ancylos Nematode extracted
                                                                                                                                                                                                                         Description
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| Nematode extracted | | 20 | 91 | 18.1 | 57 | 5 |
|--------------------|--------|----|------|------|------|----|
| AcaNAPc2. Ancylos | 77 | 17 | 91 | | 57 | 4 |
| Mature nematode | | 20 | 84 | ٠ | 57 | ω |
| Macadamia integrif | | 19 | 625 | • | 7 | N |
| Sequence encoded | | 13 | 566 | 18.3 | 57.5 | _ |
| Theobroma cacao | | 19 | 525 | | 7. | 0 |
| | | 19 | 2161 | 18.4 | 58 | 9 |
| | | 19 | 2161 | 18.4 | 58 | w |
| Human neuronal | | 16 | 2161 | 18.4 | 58 | 7 |
| Human neuronal | | 16 | 2161 | 18.4 | 58 | 01 |
| | | 14 | 2161 | 18.4 | 58 | ٥. |
| Streptococcus pneu | | 21 | 745 | 18.4 | 58 | _ |
| Human calcium chan | | 13 | 619 | 18.4 | 58 | - |
| Tobacco violaxanth | | 18 | 478 | 18.4 | 58 | |
| | | 20 | 419 | | 8 | |
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| Amino acid sequenc | | 20 | 406 | 18.6 | ω. | _ |
| | | 20 | 1462 | | 60 | œ |
| Amino acid sequenc | | 20 | 117 | 19.4 | 61 | Ī |
| Arabidopsis violax | | 18 | 462 | 19.7 | 62 | Ψ. |
| | | 21 | 451 | 19.7 | 62 | |
| | Y78884 | 21 | 255 | 19.7 | 62 | |
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| Arabidopsis flora | W39135 | 19 | 255 | 19.7 | 62 | سن |
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| + | | 19 | 255 | 19.7 | 62 | • |
| Arabidopsis floral | W23815 | 18 | 255 | | 62 | ~ |
| Human secreted | | 20 | 195 | | 62 | |
| Human normal uteru | | 20 | 115 | | 62 | - |
| ĕΨ | | 20 | 181 | | 64 | - |
| AcaNAP47. Ancylos | 71 | 17 | 181 | 20.3 | 64 | |
| Mature nematode | Y30437 | 20 | 162 | | 64 | _ |

ALIGNMENTS

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\begin{array}{c} \mathsf{CC} & \mathsf{C} & \mathsf{C} & \mathsf{C} & \mathsf{C} \\ \mathsf{CC} & \mathsf{C} & \mathsf{C} & \mathsf{C} & \mathsf{C} \\ \mathsf{CC} & \mathsf{CC} & \mathsf{CC} & \mathsf{C} & \mathsf{C} \\ \mathsf{CC} & \mathsf{CC} & \mathsf{CC} & \mathsf{CC} \\ \mathsf{CC} & \mathsf{CC} & \mathsf{CC} & \mathsf{CC} \\ \end{array}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
W62838
The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian
                                              Claim 1; Page 63-65; 96pp; English
                                                                              Novel anti-microbial protein from e.g. Macadamia useful for controlling microbial infestations of
                                                                                                                                                                                                                                                                                                                                                        Glycine max
                                                                                                                                                                                                                                                                                                                                                                                       antimicrobial protein; infestation; control
                                                                                                                                                                                                                                                                                                                                                                                                                      Glycine max antimicrobial protein.
                                                                                                                                WPI; 1998-377279/32.
                                                                                                                                                               Bower NI,
                                                                                                                                                                                             (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                            22-DEC-1997;
                                                                                                                                                                                                                                                                                            02-JUL-1998.
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                                                                                                                                                                                                                             20-DEC-1996;
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                                                                                                                                                               Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                             96AU-0004275
                                                                                                                                                                                                                                                            97WO-AU00874
                                                                                                                                                             Green JL, Manners JM,
                                                                                                                                                             Marcus
                                                                              integrifolia plants or man
                                                                                mammals
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nematode

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ID Y
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Best Local
                                               Matches
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Best Local
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                                                                                                                                                                     The invention provides a tertiary structure for the peanut allergen Ara H 1. The Ara H 1 allergen is found to contain 23 linear IgE-binding epitopes. The invention also provides an isolated recombinant peanut allergen designated Ara h 3 and a nucleotide molecule encoding the peanut allergen Ara h 3. Molecules of the invention are used to protect a host animal from allergic reaction, particularly using a modified allergen
                                                                                                      Sequence
                                                                                                                            sequence.
                                                                                                                             animal from allergic reaction, partition may also be used to which is less reactive with IgE. The invention may also be used to ensure that the allergen is not introduced into genetically modified food. The present sequence represents a soybean beta-conglycinin protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       animals
                                                                                                                                                                                                                                                     Disclosure; Fig 33A-B; 193pp; English.
                                                                                                                                                                                                                                                                            Tertiary structure of peanut allergen Ara animal from allergic reaction -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Glycine max
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peanut; allergen; Ara H 1; IgE; immunoglobulin E; epitope; Ara h 3; allergic reaction; soybean; beta-conglycinin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                              WPI; 1999-551218/46.
                                                                                                                                                                                                                                                                                                                                                                                          12-MAR-1998;
11-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9945961-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Soybean beta-conglycinin protein sequence
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                                                                                                                                                                                                                                                                                                                                                                   (UYAR-) UNIV ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                                           12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 16-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y40999 standard;
                                            Local Similarity 94.5
mes 52; Conservative
  31
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N
                                                                                                                                                                                                                                                                                                                                   Ή,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
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99US-0077763
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein; 605
                                                                                                                                                                                                                                                                                                                                               Cockrell G,
                                                       96.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                           Score 303; DB 20;
Pred. No. 4.4e-25;
3; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 315; DB 19;
Pred. No. 2.3e-26;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                   SK,
                                                                                                                                                                                                                                                                                                                                  Bannon GA,
SK, Maleki
                                                                                                                                                                                                                                                                                     h 1 for protection of
                                                                                                                                                                                                                                                                                                                                  Stanley JS,
SJ, Kopper
                                                                Length 605;
                                                                                                                                                                                                                                                                                                                                   Kopper RA;
                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               605;
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Query Match
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Thehes 15; Conserv
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W22149
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                                                                                                                                   This polypeptide comprises major peanut allergen Ara hI (W22149).

Its sequence was deduced from cDNA clone P17 (T76612), isolated

from peanut seed cDNA using a primer (see T76616) based on an

isolated Ara hI peptide (see W24206). The sequence shows

proteins of other legumes. The allergen is recognised by serum

IgE from a large proportion of individuals with peanut

hypersensitivity. Ara hI and Ara hII (see W24164) can be used to

raise monoclonal antibodies which are used in a specific two-site

MAD ELISA for the detection of Ara hI or Ara hII (claimed). IgE-

binding Ara hI antigen epitopes (see W24165-87) may be used in

vaccines to protect against allergic reactions to peanut allergens,

c e.g. anaphylactic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peanut; seed storage protein; allergen; allergy; hypersensitivity; vaccine; anaphylactic shock; immunotherapy; therapy; monoclonal antibody; ELISA; analysis; Ara hI.
                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                              Peanut allergens Ara hI and Ara hII - used for vaccination and in two-site monoclonal antibody based ELISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-MAR-1996;
29-DEC-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           W22149 standard; Protein; 614 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23-SEP-1996;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peanut allergen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W22149
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                          1 ENPKHNKCLQSCNSERDSYRNQACHARCNLLKVE 34
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enpcaqrclqscqqepddlkqkacesrctkleyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hypogaea strain Florunner.
                                                                                                                                                                                                                                                                                                                      Page 169;
                                                                                                                 614 AA;
                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                         Burks AW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96US-0610424
95US-0009455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96WO-US15222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= Mat_protein 521..523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /label= Sig_peptide 23..614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note=
                                                             28.3%;
                                                                                                                                                                                                                                                                                                                      354pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                       Cockrell G,
                                                               Score 89;
Pred. No.
                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                         Helm RM,
                                                             DB 18;
0.049;
  66
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                                                                          Length 614
                                                   Indels
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                                                 Gaps
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RESULT W62834

0

Stanley JS;

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RESULT
W22150
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Best Local Similarity
Matches 15; Conserv
                                                                                                                                                                                    Peanut; seed storage protein; allergen; allergy; hypersensitivity; vaccine; anaphylactic shock; immunotherapy; therapy; monoclonal antibody; ELISA; analysis; Ara hl.
                                                                                                                                                                                                                                                                                                                                       W22150 standard; Protein; 626 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and man
               WO9724139-A1
                                                           Modified-site
                                                                                                                                   Key
                                                                                                                                                                                                                                                 Peanut allergen Ara hI.
                                                                                                                                                                                                                                                                            29-DEC-1997 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 55-57; 96pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel anti-microbial protein from e.g. Macadamia integrifolia useful for controlling microbial infestations of plants or man
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1998-377279/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Arachis hypogaea
                                                                                                                                                            Arachis hypogaea strain Florunner.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-DEC-1997;
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                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               W62834 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                \omega_{\omega}
                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ENPKHNKCLQSCNSERDSYRNQACHARCNLLKVE 34
                                                                                                                                                                                                                                                                                                                                                                    G
                                                                                                                                                                                                                                                                                                                                                                                                  ||| :||||| | | : :|| ...
| enpcagrclqscqqepddlkqkacesrctkleyd 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               614 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96AU-0004275.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97WO-AU00874
                                                         521.
                                                                                      /label= Sig_peptide 23..626
                                                                                                                                Location/Qualifiers
                                                                       /label= Mat_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28.3%;
                                          "N-glycosylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 89; DB 19
Pred. No. 0.049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 614;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Marcus JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
 RESULT
Y15244
                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This polypeptide comprises major peanut allergen Ara hI (W22149).

Its sequence was deduced from cDNA clone P41b (T76613), isolated from peanut seed cDNA using a primer (see T76616) based on an isolated Ara hI peptide (see W24206). The sequence shows significant homology with the vicilin family of seed storage proteins of other legumes. The allergen is recognised by serum IgE from a large proportion of individuals with peanut hypersensitivity. Ara hI and Ara hII (see W24164) can be used to raise monoclonal antibodies which are used in a specific two-site MAD ELISA for the detection of Ara hI or Ara hII (claimed). IgE-binding Ara hI antigen epitopes (see W24165-87) may be used in vaccines to protect against allergic reactions to peanut allergens, e.g. anaphylactic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 15
                         27-AUG-1998;
31-JAN-1998;
13-FEB-1998;
13-FEB-1998;
13-FEB-1998;
                                                                                                                                                                                                                              allergy; immune response; transgenic; immunoglobulin E; Ig E; binding site;
                                                                                                                 29-JAN-1999;
                                                                                                                                             05-AUG-1999.
                                                                                                                                                                         W09938978-A1
                                                                                                                                                                                                     Arachis hypogea
                                                                                                                                                                                                                                                                            Peanut allergen, Ara h 1, amino acid sequence
                                                                                                                                                                                                                                                                                                         09-NOV-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                       Y15244;
                                                                                                                                                                                                                                                                                                                                                               Y15244 standard; Protein; 626 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1997-363453/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-MAR-1996;
29-DEC-1995;
(SOSI/) SOSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        two-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peanut allergens Ara hI and Ara hII - used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bannon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UYAR-) UNIV ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-JUL-1997.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
nes 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                        35 enpcaqrclqscqqepddlkqkacesrctkleyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ENPKHNKCLQSCNSERDSYRNQACHARCNLLKVE 34
                                                                                                                                                                                                                                                                                                                                                                                               σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        monoclonal antibody based ELISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 172;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         626 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Burks AW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                           98US-0141220.
98US-0073283.
98US-0074590.
98US-0074624.
98US-0074633.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     96US-0610424
95US-0009455
                                                                                                                 99WO-US02031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96WO-US15222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cockrell G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 89; DB 1
Pred. No. 0.05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Helm RM,
                                                                                                                                                                                                                                allergen;
peanut.
                                                                                                                                                                                                                                                                                                                                                                                                                                          89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for vaccination and
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13;

Indels

0:

Gaps

0

epi.tope;

Length 626

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RESULT
Y25657
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                   allergen; grass; tree; weed; pollen; fungi; mould; food; insect; sting; chiromidae; spider; mite; housefly; fruit fly; sheep blow fly; honeybee; screw worm fly; grain weevil; silkworm; bee moth; larvee; mealworm; cat; cockroach; beetle; dog; horse; cow; pig; sheep; rabbit; rat; guinea pig;
                                                                                   WPI; 1999-458255/38
                                                                                                                                                                     21-SEP-1998;
09-JAN-1998;
                                                                                                                                                                                                              11-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        By modifying the IgE binding sites the ability of the allergen to provoke an immune response is downregulated. The epitopes of the IgE binding sites can therefore be modified in genetically engineered plants and animals to elicit less of an allergic response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This is the amino acid sequence of the Ara h 1 protein from Arachis hypogea. The Ara h 1 protein has 23 IgE (Immunoglobulin E) binding epitopes, four of which are immunodominant (Y15247, Y15249, Y15250)
                         Example 6; Page 70-71; 117pp; English
                                                     Desensitizing patients to polypeptide allergens
                                                                                                                                                                                                                                                                     W09934826-A1
                                                                                                                                                                                                                                                                                             Arachis hypogea
                                                                                                                                                                                                                                                                                                                                                                            Major histocompatibility complex; class II; desensitising; human; allergen; grass; tree; weed; pollen; fungi; mould; food; insect;
                                                                                                                                                                                                                                                                                                                                                                                                                                                30-SEP-1999 (first entry)
                                                                                                                                         (IMCO-) IMPERIAL COLLEGE INNOVATIONS LTD
                                                                                                                                                                                                                                          15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                      Peanut allergen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Y25657 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Disclosure; Page 35-37; 46pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             allergies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified allergen with reduced IgE binding, useful for treating e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (UYAR-) UNIV ARKANSAS
(UYNY) UNIV NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35 enpcaqrclqscqqepddlkqkacesrctkleyd 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ENPKHNKCLQSCNSERDSYRNQACHARCNLLKVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
 invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1999-479189/40
                                                                                                                                                                                                                                                                                                                         gerbil;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Burks AW,
describes
                                                                                                                                                                     98GB-0020474.
98GB-0000445.
                                                                                                                                                                                                              99WO-GB00080
                                                                                                                                                                                                                                                                                                                                                                                                                      1168391 Ara h I protein fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein; 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MT SINAI SCHOOL MEDICINE
                                                                                                                                                                                                                                                                                                                         treatment; prevention; hypersensitivity; peanut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sampson HA,
a novel method of desensitizing a patient
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 89; DB 2
Pred. No. 0.05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sosin H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
to
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Y30426
8
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Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                       Screening an .
                                                                                                                                                           Bergum PW, Ga
Lauwereys MJ,
Vlasuk GP;
                                                                                                                                                                                                                                                                                      19-APR-1996;
18-OCT-1994;
05-JUN-1995;
05-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          possesses the MRC class II molecule. The methods can be used for desensitising patients to allergens present in e.g. grass, tree and weed (including ragweed) pollens, fungi and moulds, foods, stinging insects, the chiromidae (non-biting midges), spiders and mites, housefly, fruit fly, sheep blow fly, screw worm fly, grain weevil, silkworm, honeybee, non-biting midge larvae, bee moth larvae, mealworm, cockroach, larvae of Tenibrio mollitor beetle, mammals such as cat, dog, horse, cow, pig, sheep, rabbit, rat, guinea pig, mice or gerbil. They can also be used to produce immunological vaccines which may be used to prevent and/or treat conditions involving hypersensitivity to allergens. This sequence represents a peanut (Arachis hypogea) allergen 1168391 Ara h I.
                                                   Disclosure; Columns 137-138; 197pp; English.
                                                                                                                                                                                                                                                           05-JUN-1995;
05-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nematode extracted anticoagulant protein; NAP; anticoagulant; serine protease inhibitor; NAP domain; factor VIIa/TF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polypeptide allergen and comprises administering to the patient a peptide derived from the allergen where restriction to a MHC Class II molecule possessed by the patient can be demonstrated for the peptide and the peptide is able to induce a late phase response in an individual who peptide is able to induce a late phase response in an individual who
                                                                                                                             WPI; 1999-539569/45
                                                                                                                                                                                                                                                                                                                                                             19-APR-1996;
                                                                                                                                                                                                                                                                                                                                                                                         21-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ancylostoma caninum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mature nematode extracted anticoagulant protein AcaNAP45d2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-NOV-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Y30426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y30426 standard; Protein;
                                                                                                                                                                                                                   (CORV-) CORVAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _{5}^{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ENPKHNKCLQSCNSERDSYRNQACHARCNLLKVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           enpcaqrclqscqqepddlkqkacesrctkleyd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
15; Conserv
                                                                                              an isolated protein for Nematode-extracted Anticoagulant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         626 AA;
                                                                                                                                                                        Gansemans YGJ,
J, Messens JHL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                              95US-0486397.
95US-0486399.
95WO-US13231.
                                                                                                                                                                                                                                                                                      96US-0634641.
94US-0326110.
95US-0461965.
95US-0465380.
                                                                                                                                                                                                                   INT INC
                                                                                                                                                                                                                                                                                                                                                             96US-0634641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78
                                                                                                                                                                       Jespers LS,
Moyle M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 89;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                        Stanssens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 20;
0.05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34
                                                                                                                                                                                       Laroche
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
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The present sequence represents a nematode extracted anticoagulant protein (NAP). The protein has activity as an anticoagulant and/or protease inhibitor. The protein contains at least one NAP domain ψ

domain which and/or serine

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RESULT
Y30436
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                   19-APR-1996;
18-CCT-1994;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
17-OCT-1995;
                                                                                                 Bergum PW, Ga
Lauwereys MJ,
Vlasuk GP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           isolated protein in an ex vivo prothrombin time (PT) assay and an ex vivo activated partial thromboplastin time (aPTT) assay; calculating prolongation of clotting effected by the isolated protein in each of the PT and aPTT assay, with respect to a baseline clotting value for each assay, where prolongation of clotting is calculated as fold elevation of clotting time relative to a baseline clotting value, where a doubling of clotting time is deemed a two-fold elevation; and calculating a PT to aPTT prolongation ratio, where a ratio at least one is indicative of factor VIIa/TF inhibitory activity. The method is useful for determining if a protein has factor VIIa/TF inhibitory
Disclosure; Fig 18; 197pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y30436 standard; Protein; 162 AA
                                         Screening an isolated protein for Nematode-extracted Anticoagulant
                                                                                                                                                                                                                                                                                                    19-APR-1996;
                                                                                                                                                                                                                                                                                                                                                            US5955294-A
                                                                                                                                                                                                                                                                                                                                                                                      Ancylostoma caninum.
                                                                                                                                                                                                                                                                                                                                                                                                               serine protease inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mature nematode extracted anticoagulant protein AcaNAP45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-NOV-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    has selective inhibitory activity for factor VIIa/TF. The specification describes a method for screening an isolated protein at least one domain for factor VIIa/TF selective inhibitory activity. The method comprises determining the time to clotting effected by a concentration of the
                              Protein domains
                                                                      WPI; 1999-539569/45
                                                                                                                                                                                                                                                                                                                                21-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                              Nematode extracted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                          (CORV-) CORVAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75 etkh 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49 RPQH 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5 HNKCLQSCNSERDSYRNQACHAR-----CN--LLK-----VEKEECEEGEIPRPRP 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ykqcerkcnkelsekdeeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      78 AA;
                                                                                                                             Gansemans YGJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                 96US-0634641.
94US-0326110.
95US-0461965.
95US-0465380.
95US-0486397.
95US-0486399.
                                                                                                                                                          INT INC
                                                                                                                Messens JHL,
                                                                                                                                                                                     95WO-US13231
                                                                                                                                                                                                                                                                                                    96US-0634641
                                                                                                                                                                                                                                                                                                                                                                                                                            anticoagulant protein; NAP; anticoagulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21.3%;
29.7%;
                                                                                                                                                                                                                                                                                                                                                                                                               NAP domain; factor VIIa/TF
                                                                                                                           Jespers LS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 67;
                                                                                                                Moyle M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 1.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                             Stanssens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 20;
                                                                                                                             Laroche YR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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RESULT 10
R91711
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                               05-JUN-1995;
18-OCT-1994;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
            WPI; 1996-222007/22.
N-PSDB; T12957.
                                                                                                                                                                                                                                                                                                                                                            nematode-extracted anticoagulant protein; serine protease; nematode; thrombosis; parasitic worm.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           isolated protein in an ex vivo prothrombin time (PT) assay and an ex vivo activated partial thromboplastin time (aPTT) assay; calculating prolongation of clotting effected by the isolated protein in each of the PT and aPTT assay, with respect to a baseline clotting value for each assay, where prolongation of clotting is calculated as fold elevation of clotting time relative to a baseline clotting value, where
                                                        Vlasuk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a doubling of clotting time is deemed a two-fold elevation; and calculating a PT to aPTT prolongation ratio, where a ratio at least one is indicative of factor VIIa/TF inhibitory activity. The method useful for determining if a protein has factor VIIa/TF inhibitory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence represents a nematode extracted anticoagulant protein (NAP). The protein has activity as an anticoagulant and/or sering protease inhibitor. The protein contains at least one NAP domain which has selective inhibitory activity for factor VIIa/TF. The specification describes a method for screening an isolated protein at least one domain for factor VIIa/TF selective inhibitory activity. The method comprises
                                                                        Lauwereys
                                                                                                                                                                                                                                         17-OCT-1995;
                                                                                                                                                                                                                                                                                                   WO9612021-A2
                                                                                                                                                                                                                                                                                                                                 Ancylostoma caninum.
                                                                                                                                                                                                                                                                                                                                                                                      ACANAP; HponAP; NamnAP; AceNAP; AduNAP; anticoagulant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R91711;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R91711 standard; Protein; 181 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        activity.
                                                                                                                  (CORV-) CORVAS
                                                                                                                                                                                                                                                                       25-APR-1996.
                                                                                                                                                                                                                                                                                                                                                                                                                           ACANAP45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          determining the time to clotting effected by a concentration of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          159 etkh 162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49 RPQH 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99 ykgcerkcnkelsekdeeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5 HNKCLQSCNSERDSYRNQACHAR-----CN--LLK-----VEKEECEEGEIPRPRP 48
                                                        GP;
                                                                                     PW,
                                                                      MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           162
                                                                      Gansemans YGJ,
J, Messensjhl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                             95US-0486399.
94US-0326110.
95US-0461965.
95US-0465380.
95US-0486397.
                                                                                                                    INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA;
                                                                                                                                                                                                                                         95WO-US13231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21.3%;
                                                                      Jespers LS, Laroch
Moyle M, Stanssens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 67; I
Pred. No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                     Laroche YR;
Stanssens PEH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
2.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20; Length 162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and/or serine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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RESULT
Y30409
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Proteins with anticoagulant and/or serine protease inhibitory activity, isolated from nematodes, are useful to inhibit blood coagulation. The proteins can be added to blood collection tubes defining the collection of mammalian plasma. They are also useful to prevent or inhibit thrombosis, and may be given alone or in combination with other therapeutic or in vivo diagnostic agents. The proteins can serve as immunogens to raise antibodies for use in the diagnosis and identification of NAP concn. levels in biological fluids, e.g. to detect mammalian infection with a parasitic worm. They can also be used as immunogens in prophylactic and therapeutic vaccines against parasitic worm infection. The proteins may double the clotting time of human plasma in prothrombin time assays when present at 10-50 nWol, and double the clotting time of human plasma in activated partial thrombin time assays when present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                      19-APR-1996;
18-OCT-1994;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
                                                                                                                                                                                                             US5955294 - A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               americanus or Heligomosmoides polygyrus.

The proteins pref. have 2 NAP domains and specifically inhibit the catalytic activity of the factor VIIa/TF complex in the presence of factor Xa or a catalytically inactive factor Xa deriv., do not specifically inhibit the activation of factor VIIa in the absence of TF and do not specifically inhibit prothrombinase.
                                                                                                                                           19-APR-1996;
                                                                                                                                                                                                                                              Ancylostoma
                                                                                                                                                                                                                                                                             Nematode extracted anticoagulant protein; NAP; anticoagulant; serine protease inhibitor; NAP domain; factor VIIa/TF.
                                                                                                                                                                                                                                                                                                                            Nematode extracted anticoagulant protein AcaNAP44.
                                                                                                                                                                                                                                                                                                                                                                                                                               Y30409 standard; Protein; 181 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proteins with anticoagulant and/or serine protease inhibitory activity - isolated from nematodes and useful to inhibit blood
                                                                                                                                                                                                                                                                                                                                                                15-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The anticoagulant proteins are pref. derived from Ancylostoma caninum, A. ceylanicum, A. duodenale, Necator
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       coagulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     at 10-100 nMol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178 etkh 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49 RPQH 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 HNKCLQSCNSERDSYRNQACHAR------CN--LLK-----VEKEECEEGEIPRPRP 48
: :| :| : || : | || : || :| :| :| :|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ykqcerkcnkelsekdeeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221; Fig 13F;
١.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                              caninum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                             '(first entry)
                      96US-0634641.
94US-0326110.
95US-0461965.
95US-0465380.
95US-0486397.
95US-0486399.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                           96US-0634641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      243pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 67;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16;
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Y30427
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Best Local S
Matches 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      isolated protein in an ex vivo prothrombin time (PT) assay and an ex vivo activated partial thromboplastin time (aPT) assay; calculating prolongation of clotting effected by the isolated protein in each of the PT and aPTT assay, with respect to a baseline clotting value for each assay, where prolongation of clotting is calculated as fold elevation of clotting time relative to a baseline clotting value, where a doubling of clotting time is deemed a two-fold elevation; and calculating a PT to aPTT prolongation ratio, where a ratio at least one is indicative of factor VIIa/TF inhibitory activity. The method is useful for determining if a protein has factor VIIa/TF inhibitory
19-APR-1996;
                               19-APR-1996;
                                                                                                                               Ancylostoma caninum
                                                                                                                                                               serine protease
                                                                                                                                                                                                                Mature nematode extracted anticoagulant protein AcaNAP47d2
                                                                                                                                                                                                                                                                                      Y30427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        has selective inhibitory activity for factor VIIa/TF. The specification describes a method for screening an isolated protein at least one domain for factor VIIa/TF selective inhibitory activity. The method comprises
                                                                                                                                                               Nematode extracted anticoagulant protein; NAP; anticoagulant; serine protease inhibitor; NAP domain; factor VIIa/TF.
                                                                                                                                                                                                                                                     15-NOV-1999
                                                                                                                                                                                                                                                                                                                     Y30427 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-539569/45.
N-PSDB; Z10457.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            determining the time to clotting effected by a concentration of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein (NAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 12; Fig 13F; 197pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Screening an isolated protein for Nematode-extracted Anticoagulant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vlasuk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bergum PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-OCT-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protease inhibitor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CORV-) CORVAS INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lauwereys MJ, Messens
                                                                                                                                                                                                                                                                                                                                                                                                          178 etkh 181
                                                                                                                                                                                                                                                                                                                                                                                                                                       49 RPQH 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 HNKCLQSCNSERDSYRNQACHAR------CN--LLK------VEKEECEEGEIPRPRP 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ykqcerkcnkelsekdeeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ch 21.3%;
l Similarity 29:7%;
19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence represents a nematode extracted anticoagulant P). The protein has activity as an anticoagulant and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gansemans YGJ,
J, Messens JHL,
                                                                                                                                                                                                                                                 (first entry)
                               96US-0634641.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The protein contains at least one NAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Score 67; DB 2; Pred. No. 3.3; 9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jespers LS,
Moyle M, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Laroche
Stanssens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 20; Length 181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and/or serine
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PD XXX
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Y30437
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
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05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               elevation of clotting time relative to a baseline clotting value, where a doubling of clotting time is deemed a two-fold elevation; and calculating a PT to aPTT prolongation ratio, where a ratio at least one is indicative of factor VIIa/TF inhibitory activity. The method is useful for determining if a protein has factor VIIa/TF inhibitory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       determining the time to clotting effected by a concentration of the isolated protein in an ex vivo prothrombin time (PT) assay and an ex activated partial thromboplastin time (aPTT) assay; calculating prolongation of clotting effected by the isolated protein in each of the PT and aPTT assay, with respect to a baseline clotting value for each assay, where prolongation of clotting is calculated as fold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein (NAP). The protein has activity as an anticoagulant and/or serine protease inhibitor. The protein contains at least one NAP domain which has selective inhibitory activity for factor VIIa/TF. The specification describes a method for screening an isolated protein at least one domain for factor VIIa/TF selective inhibitory activity. The method comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Screening an isolated protein for Nematode-extracted Anticoagulant Protein domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bergum PW, Ga
Lauwereys MJ,
                             US5955294-A
                                                        Ancylostoma
                                                                                                  Nematode extracted anticoagulant protein; NAP; anticoagulant;
                                                                                                                             Mature nematode extracted anticoagulant protein AcaNAP47
                                                                                                                                                             15-NOV-1999
                                                                                                                                                                                                                       Y30437 standard; Protein; 162 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Disclosure; Columns 139-140; 197pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1999-539569/45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17-OCT-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                              75 etkh 78
                                                                                                                                                                                                                                                                                                                           49 RPQH 52
                                                                                                                                                                                                                                                                                                                                                  15 ykqcerkcseelsekneeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 74
                                                                                                                                                                                                                                                                                                                                                                    present sequence represents a nematode extracted anticoagulant
                                                                                    protease
                                                                                                                                                                                                                                                                                                                                                                                                                 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78
                                                        caninum
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J, Messens JHL,
                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94US-0326110.
95US-0461965.
95US-0465380.
95US-0486397.
95US-0486399.
95WO-US13231.
                                                                                    inhibitor;
                                                                                                                                                                                                                                                                                                                                                                                                                             20.3%;
                                                                                     NAP
                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jespers LS,
Moyle M,
                                                                                                                                                                                                                                                                                                                                                                                                                             Score 64; I
Pred. No. 2.
                                                                                    domain; factor VIIa/TF
                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stanssens PEH
                                                                                                                                                                                                                                                                                                                                                                                                                             DB
2.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
                                                                                                                                                                                                                                                                                                                                                                                                                 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 78
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ex vivo
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RESULT
R91712
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                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein (NAP). The protein has activity as an anticoagulant and/or serine CC protease inhibitor. The protein contains at least one NAP domain which chas selective inhibitory activity for factor VIIa/TF. The specification CC describes a method for screening an isolated protein at least one domain cf for factor VIIa/TF selective inhibitory activity. The method comprises consisted protein in an ex vivo prothrombin time (PT) assay and an ex vivo calculating protein in each of the continuation of clotting effected by a concentration of the continuation of clotting effected by the isolated protein in each of continuation of clotting effected by the isolated protein each of continuation of clotting time repeat to a baseline clotting value for each assay, where prolongation of clotting is calculated as fold clevation of clotting time relative to a baseline clotting value, where a doubling of clotting time is deemed a two-fold elevation; and consisting protein protein has factor viia/TF inhibitory. The method is useful for determining if a protein has factor viia/TF inhibitory
                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19-APR-1996;
18-OCT-1994;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
17-OCT-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bergum PW, Gan
Lauwereys MJ,
Vlasuk GP;
                                                                                                                                                      R91712 standard; Protein; 181 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; Fig 19; 197pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Screening an isolated protein for Nematode-extracted Anticoagulant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-539569/45
                                                                                                                             R91712;
                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                      activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence represents a nematode extracted anticoagulant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (CORV-) CORVAS INT INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19-APR-1996;
                                                                                                 17-NOV-1996
                                                                                                                                                                                                                                 159 etkh 162
                                                                                                                                                                                                                                                           49 RPQH 52
                                                                                                                                                                                                                                                                                        99 ykqcerkcseelsekneeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 158
                                                                                                                                                                                     14
                                                                                                                                                                                                                                                                                                                     5 HNKCLQSCNSERDSYRNQACHAR-----CN--LLK-----VEKEECEEGEIPRPRP 48
                                                                                                                                                                                                                                                                                                                                                  l Similarity
18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                          162
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J, Messens JHL,
                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95US-0461965.
95US-0465380.
95US-0486397.
95US-0486399.
95WO-US13231.
                                                                                                                                                                                                                                                                                                                                                                                                                          AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  96US-0634641
94US-0326110
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                                                                                                                                                                                                                                                                                                                                                               20.3%;
                                                                                                                                                                                                                                                                                                                                                  10;
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Moyle M,
                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                             Score 64;
                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Stanssens
                                                                                                                                                                                                                                                                                                                                                                              DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Laroche
                                                                                                                                                                                                                                                                                                                                                                             20;
                                                                                                                                                                                                                                                                                                                                                  20;
                                                                                                                                                                                                                                                                                                                                                                             Length 162;
                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                  16;
                                                                                                                                                                                                                                                                                                                                                Gaps
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ACANAP; HPONAP; NamNAP; ACENAP; AduNAP; anticoagulant; nematode-extracted anticoagulant protein; serine protease; nematode; thrombosis; parasitic worm.

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RESULT
Y30410
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                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 18; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-OCT-1994;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
               Y30410 standard;
                                                                                                                                                                                                                                                                                                                                        americanus or Heligomosmoides polygyrus.

The proteins pref. have 2 NAP domains and specifically inhibit the catalytic activity of the factor VIIa/TF complex in the presence of factor Xa or a catalytically inactive factor Xa deriv., do not specifically inhibit the activation of factor VIIa in the absence of TF and do not specifically inhibit prothrombinase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          They can also be used as immunogens in prophylactic and therapeutic vaccines against parasitic worm infection. The proteins may double the clotting time of human plasma in prothrombin time assays when present at 10-50 nMol, and double the clotting time of human plasma in activated partial thrombin time assays when present at 10-100 nMol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Proteins with anticoagulant and/or serine protease inhibitory activity, isolated from nematodes, are useful to inhibit blood coagulation. The proteins can be added to blood collection tubes defining the collection of mammalian plasma. They are also useful to prevent or inhibit thrombosis, and may be given alone or in combination with other therapeutic or in vivo diagnostic agents. The proteins can serve as immunogens to raise antibodies for use in the diagnosis and identification of NAP concn. levels in biological fluids, e.g. to detect mammalian infection with a parasitic worm.
                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                           The anticoagulant proteins are pref. derived from Ancylostoma caninum, A. ceylanicum, A. duodenale,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 221; Fig 13G; 243pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Proteins with anticoagulant and/or serine protease inhibitory activity - isolated from nematodes and useful to inhibit blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1996-222007/22.
N-PSDB; T12958.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUN-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ancylostoma caninum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bergum PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (CORV-) CORVAS
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                                                                                               178 etkh 181
                                                                                                                                                             118 ykqcerkcseelsekneeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 177
                                              15
                                                                                                                              49 RPQH 52
                                                                                                                                                                                            5 HNKCLQSCNSERDSYRNQACHAR-----CN--LLK-----VEKEECEEGEIPRPRP 48
                                                                                                                                                                                                                                                                                                                181
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J, Messensjhl,
                                                                                                                                                                                                                                Conservative
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94US-0326110.
95US-0461965.
95US-0465380.
95US-0486397.
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           Protein; 181
                                                                                                                                                                                                                                             20.3%; Score 64; 28.1%; Pred. No.
                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jespers LS, Laroche YR;
Moyle M, Stanssens PEH;
                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                             6.9;
                                                                                                                                                                                                                                                                                                                                                                                                                                             duodenale, Necator
                                                                                                                                                                                                                                                           DB 17;
                                                                                                                                                                                                                            20;
                                                                                                                                                                                                                                                             Length 181;
                                                                                                                                                                                                                              Indels
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                                                                                                                      Matches
                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19-APR-1996;
18-OCT-1994;
05-JUN-1995;
05-JUN-1995;
05-JUN-1995;
17-OCT-1995;
                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nematode extracted anticoagulant protein; NAP; anticoagulant; serine protease inhibitor; NAP, domain; factor VIIa/TF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 12; Fig 13G; 197pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Screening an isolated protein for Nematode-extracted Anticoagulant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-539569/45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vlasuk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bergum PW,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-SEP-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nematode extracted anticoagulant protein AcaNAP45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Y30410;
                                                          118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lauwereys MJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CORV-) CORVAS INT INC
178 etkh 181
                             49
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                             RPQH 52
                                                        ykqcerkcseelsekneeaclsractgracvcndglyrddfgncvekdecndmeiitfpp 177
                                                                                      HNKCLQSCNSERDSYRNQACHAR------CN--LLK-----VEKEECEEGEIPRPRP 48
                                                                                                                    1 Similarity
18; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    domains
                                                                                                                                                                                                  181
                                                                                                                      Conservative
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J, Messens JHL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
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94US-0326110.
95US-0461965.
95US-0465380.
95US-0486397.
95US-0486399.
95WO-US13231.
                                                                                                                                                                                                AA;
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                                                                                                                                   20.3%;
                                                                                                                    10;
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Moyle M,
                                                                                                                                   Score
Pred.
                                                                                                                      Mismatches
                                                                                                                                   No 4
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                                                                                                                                      σ
                                                                                                                                                    DB 20;
                                                                                                                    20;
                                                                                                                                                 Length 181;
                                                                                                                    Indels
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